

American Society for Testing Materials BULLETIN

ISSUED



BI MONTHLY

April, 1927

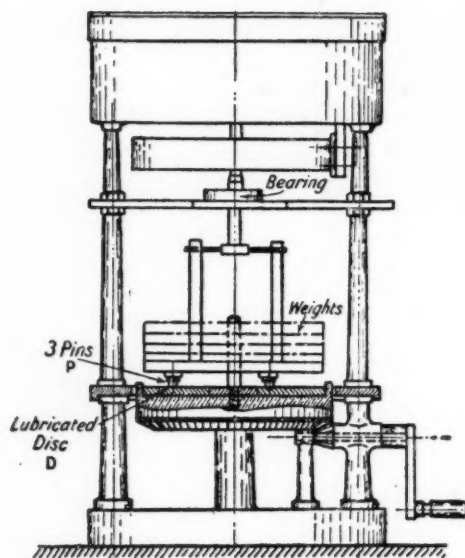
Twenty-Fifth Anniversary

THE SOCIETY was incorporated on June 4, 1902, so we are now rounding out twenty-five years under our present Charter. The occasion will be suitably commemorated at the ANNUAL MEETING in June. The accomplishments of the Society in this quarter century—its specifications and tests, the increased knowledge of materials, the establishment of better understanding of the technical considerations involved in the exchange of materials which brings in so intimately the human side and the personal and industrial relations of producer and user—all these furnish an inspiration for continued growth and the further development of the Society's usefulness to the engineering profession and to industry.

French Lick, Indiana, June 20-24

ENGINEERS' CLUB BUILDING
1315 SPRUCE ST., PHILADELPHIA

IF LUBRICANTS are intended to reduce friction between metallic surfaces, then the best method of testing their efficiency is to *measure directly the reduction of friction which results from their use*



The operation of the "Deeley Static Friction Testing Machine" devolves essentially upon two opposing friction surfaces. One (the lower), is the disc *D*, and the other (the upper), consists of three pegs *P*, equally spaced in a circle on the lower side of a rotating carriage. The latter is centred by a spindle, co-axial with the disc, and is provided with vertical posts which engage the cross-head of a torque-meter. The pressure between the surfaces in frictional contact is varied by loading the carriage with disc weights. The disc *D*, and the lubricant in which it is immersed, are carried in a tray. The machine is operated by rotating the disc *D*. The frictional resistance between the disc and the pegs then causes rotation of the carriage against the action of the torque-meter. The torque thus produced on the carriage is equal to the frictional torque. The maximum value of static friction, the measurement of which is the main function of the Deeley machine, is determined by continuing the rotation of the disc until slipping of the opposed surfaces occurs.

The test result is indicated on a direct-reading scale, and a dial pointer is kept at the test value until released by the operator.

Very important researches have already been carried out by means of the Deeley machine. They have established the fact that oils of equal viscosity may differ largely in their lubricating efficiency. They have confirmed the superiority of the vegetable oils over the mineral oils as lubricants and have shown that lubricating efficiency depends also upon the molecular attrac-

tion between the oils and the alloys which they cover. For instance, it has been shown that most lubricants possess a greater "friction-reducing power" between surfaces of mild steel and cast iron than between mild steel and lead bronze.

It is a certainty that systematic tests and researches by means of the Deeley machine will lead to important discoveries and to radical improvements in lubricating practice, both in regard to the lubricants and the bearing alloys.

Write for free copy of booklet describing the Deeley Friction Testing Machine

HERMAN A. HOLZ

Testing Engineer

Complete Line of Machines and Instruments of High Quality
for the Testing of Materials

17 Madison Avenue, New York, N. Y.

"FOR EVERY TEST—THE BEST"

American Society for Testing Materials



BULLETIN

ENGINEERS' CLUB BUILDING

1315 SPRUCE STREET

PHILADELPHIA, PENNA.

NUMBER 26

APRIL 28, 1927

Thirtieth Annual Meeting, June 20-24

THE Thirtieth Annual meeting of the Society, which will be held at the French Lick Springs Hotel, French Lick, Ind., will open on Monday, June 20. No sessions of the annual meeting have been scheduled for that day for it has been reserved for committee meetings and registration. The General Opening Session will be held on Tuesday afternoon at 2 o'clock. Immediately following this, two simultaneous technical sessions will be convened at 3 P. M. As in the past, simultaneous sessions on a number of occasions will be necessary but the general opening session and the closing session and two other sessions, one devoted to testing and the presidential address and the other to a discussion of corrosion and fatigue, will be single sessions. In addition one session devoted exclusively to the Edgar Marburg Lecture has been arranged for Wednesday afternoon. In all, thirteen sessions will be held, each of them containing many valuable reports and papers, so that the field covered by the Society's activities is very well represented.

Transportation

Transportation has been arranged on the identification certificate plan which plan provides for transportation to and from the meeting at one and one-half single fare. Details concerning transportation are given on page 3.

Program of the Meeting

Attention is called to the Provisional Program, a copy of which is enclosed. The program features a Symposium on Field Control of the Quality of Concrete which will be held during the Thirteenth Session of the meeting. It is expected that the papers presented at this symposium will stimulate much interest and discussion.

Corrosion will again receive considerable attention, and since this subject is of very general interest the several reports and papers on this subject and on the subject of fatigue are being presented at a general session on Thursday morning with no parallel session being held at the same time. The effect of high temperatures upon the properties of metals is of ever-increasing importance and is again discussed. Considerable progress has been made in the magnetic analysis of steel and papers are presented on the practical applica-

(Continued on page 2)

Membership

Increase of Society membership is not a new subject but is one ever of importance. So long as we feel, as we do, that greater usefulness of the Society will result principally through having its work better known, the best means to this end is to have all those who should be kept intimately in touch with the Society's activities, as members.

This is a particularly opportune time to acquaint prospective members with the work of the Society, for new members may secure preprints of such reports and papers in which they may be interested. The Provisional Program for the approaching annual meeting has just become available and scarcely a better means could be desired than this for pointing out the broad field covered by the Society and the nature of the reports and papers presented at its meetings, showing how the Society is dealing with immediate and important problems in engineering materials. The Program is one of the best in years and should make a strong appeal to any one engaged in the production, use or testing of materials. A card is enclosed with the Program, which may be used in seeing that a copy of the Program is forwarded to any one whom you feel would be interested.

Our record for new members so far has been quite satisfactory. As a result of our approach to the municipalities, twenty-two cities and towns have taken out membership for one or another of their departments. We should like to build up our membership among municipalities, and efforts are being continued to accomplish this. Our standing committees have likewise been instrumental in secur-

ing a number of new members.

The present membership of the Society is 4118. We should be able to increase this by 250 within the next two months, that is, by the time of the annual meeting. This will be easily possible if every member takes advantage of whatever opportunities are offered for making use of the Provisional Program and the application blank enclosed herewith. By making use of this blank you can be of service in advancing the work of the Society, not only by virtue of an increase in numbers alone, which in itself means increased support, but in spreading the service the Society can render to the community at large. **Make use of the application blank now.**

To secure PREPRINTS of reports and papers, use the enclosed REQUEST BLANK.

Mail the return card on TRANSPORTATION at once.

Thirtieth Annual Meeting

(Continued from page 1)

tion of such tests either in the form of separate papers or as a part of the report of the Committee on Magnetic Analysis.

Committee E-1 on Methods of Testing is presenting recommendations on the testing of thin sheet metals, the result of the work of a very active group in that committee. This general subject is treated in two independent papers covering the testing of both thin sheet steel and non-ferrous metals. The testing of thin sheets of non-ferrous metals has been the subject of an extended investigation with special reference to a study of hardness tests, which investigation is reported on in a further contribution.

The Society is always fortunate in having a number of valuable papers on testing and testing apparatus. This year is no exception as will be seen from the papers describing apparatus for measuring elongation and a paper discussing the application of the spectrograph in an industrial laboratory. This is the first time that the spectrograph has been brought to the attention of the members through a paper presented at the annual meeting.

Preprints

The usual plan of distributing preprints will again be followed. Under this plan the members will receive in advance of the meeting only those committee reports and papers which they have requested the Secretary-Treasurer to forward. All members attending the annual meeting will receive as they register a complete set of preprints of reports and papers.

A request blank for preprints is enclosed on which the reports and papers are listed. A brief abstract of most of the reports and papers has been included in the Provisional Program which should be of assistance to the members in making a selection of the items which they will wish to secure. A member wishing to obtain preprints should indicate on the blank those which he desires and should forward the signed blank promptly to the Secretary-Treasurer. The preprints requested will then be forwarded as they become available, the first installment being placed in the mails late in May. A second installment will be mailed about the middle of June and a third during or after the annual meeting.

A prompt return by each member of his request blank will greatly facilitate the distribution of preprints. **Preprints will not be mailed to members unless requested.**

Hotel Reservations

In making reservations at the French Lick Springs Hotel, the Society headquarters, members are requested to use the enclosed card addressed to the hotel management. A prompt advance reservation of rooms is advisable. French Lick Springs Hotel is operated entirely upon the American plan and the special rates that are being made available to the members and their guests, which will prevail a few days before and after the meeting, are here repeated as announced in the March BULLETIN.

Single rooms, with bath or connecting bath.....	\$12 per day
Double rooms, with bath or connecting bath.....	18 " "
Single rooms, without bath.....	10 " "
Double rooms, without bath.....	16 " "

The hotel requests that so far as possible members double up in rooms equipped with two beds and bath.

A folder descriptive of the hotel and its surroundings will be mailed to the members by the hotel management within a few days.

Registration at Annual Meeting

Members planning to attend the annual meeting are requested to fill out and mail promptly the accompanying card addressed to the Society. This will facilitate registration at the meeting. Members should arrange for the registration of ladies in their party promptly upon their arrival. All men attending the meeting will be charged a registration fee of \$2.00 and ladies \$1.00.

Anniversary Dinner

On Wednesday, June 22, at 6.30 P.M. a dinner will be held to which all members and their families and guests are invited, to commemorate the twenty-fifth anniversary of the incorporation of the Society. Those members who have been continuously affiliated with the Society during these twenty-five years will be the honored guests. Honorary Membership will be conferred upon Robert W. Lesley, Past-Vice-President and Incorporator; William R. Webster, Incorporator; and A. A. Stevenson, Past-President of the Society. The first award of the Dudley Medal will be made to D. J. McAdam, Jr., for his paper presented at the 1926 meeting.

No charge will be made for the dinner to those registered at the French Lick Springs Hotel.

Entertainment Features

Entertainment is being arranged by the Entertainment Committee composed of:

W. H. Finkeldey, <i>Chairman</i>	T. A. Hicks
R. D. Bonney	H. H. Morgan
F. M. Crapo	C. S. Trewin

The annual Golf and Tennis Tournaments will be held as usual on Friday afternoon. The tentative program of entertainment for the ladies includes a formal tea on Tuesday afternoon, a bridge party on Wednesday afternoon, the annual dance following the Anniversary Dinner on Wednesday evening, a tea and musical and informal dance Thursday afternoon and a luncheon at the Golf Club House on Friday afternoon. There are other features in preparation. A printed announcement of all entertainment features will be handed to members and ladies as they register.

Reduced Railroad Rates

All of the Passenger Associations, with the exception of the Canadian Passenger Association, Western Lines, have granted reduced rates for transportation to the French Lick meeting on the Identification Certificate Plan. Round trip tickets will be sold at one and one-half single fare to holders of the Identification Certificates. These certificates will be mailed to the members late in May.

Certificates are valid only for members and dependent members of their families. Companies, firms, etc., holding corporate Society membership wishing to be represented at the annual meeting by more than one individual can secure an additional certificate from the Society for each additional representative. Certificates are only good on the purchase of tickets using the same route both going and return.

The dates for the sale of the tickets will vary according to the distance from French Lick but except for the more distant points tickets will generally be on sale from June 16 to June 22. Likewise, the final return limit in general is June 30 with the exception of the more distant points. Members should consult their local ticket agent for exact selling dates and expiration dates. Tickets must be validated at French Lick by the railroad representative.

Further announcement will be made in a circular in May with which the railroad certificates will be mailed.

Transportation to Annual Meeting

In the March BULLETIN announcement was made of the personnel of the special committee appointed to handle transportation in connection with the approaching annual meeting, the chairman being Mr. N. L. Mochel, Metallurgical Engineer, Westinghouse Electric and Manufacturing Co., Lester Station, Philadelphia, Pa.

Plans have been developed to run special trains from the East. If the demand warrants there will be special trains leaving New York on Saturday, June 18, Sunday, June 19 and Monday, June 20. These trains will run as sections of train No. 1, the National Limited of the Baltimore & Ohio Railroad, commanding the same splendid service as the regular National Limited. They will leave New York City from Liberty Street at 12.55 P. M., Eastern Standard Time, making connections at Philadelphia, Baltimore, Washington, Pittsburgh and Cincinnati, arriving at French Lick shortly after noon the following day.

In addition, if the demand warrants, special cars will be made up from the principal cities and attached to the regular through trains.

Further details, including the personnel of the Transportation Committee, are given in the Provisional Program.

There is enclosed a return card addressed to the chairman of the Transportation Committee which each member expecting to attend the annual meeting should fill out and promptly mail. The return cards will be referred by the chairman for making final arrangements to the member of the Transportation Committee in whose territory the applicant resides. To make proper arrangements with the railroads, it is important that the return cards be filled in and mailed promptly so that the transportation desired may be provided. Berths will be assigned in the order of receipt of requests and each member sending in his card will be advised as soon as possible regarding the arrangements made.

The Transportation Committee desires to render every assistance to the members in making their journey to and from French Lick a pleasant one. To do this it needs the cooperation of the members attending the meeting.

Dr. George L. Clark to be Marburg Lecturer Will Speak on "X-rays in Industry"

We are pleased to announce to the members of the Society that Dr. George L. Clark, Professor of Applied Chemical Research and Divisional Director of the Research Laboratory of Applied Chemistry in the Massachusetts Institute of Technology, has been selected to deliver the second Edgar Marburg Lecture at the annual meeting. His subject is one of particular importance and timeliness in view of developments that are taking place in the applications of X-rays in the field of materials. The Lecture will be at 4 o'clock on Wednesday, June 22.

Doctor Clark is a noted authority upon the X-ray. Graduating from De Pauw University, he continued his studies at the University of Chicago, held a professorship of chemistry at De Pauw University and Vanderbilt University, and for three years was Rockefeller Foundation Fellow in X-ray Science at Harvard University. He established the first X-ray laboratory devoted to application of industrial rays, has published a number of papers and has written a book on "Applied X-rays." He is a member of the International Congress of Radiology, the American Chemical Society and the American Physical Society.

Nominations for Officers

The following nominations for officers are announced:

For President:

H. F. Moore, Professor of Engineering Materials, University of Illinois, Urbana, Ill.

For Vice-President:

T. D. Lynch, Manager, Materials and Process Engineering Department, Westinghouse Electric and Manufacturing Co., East Pittsburgh, Pa.

For Members of Executive Committee:

F. O. Clements, Director of Research, General Motors Corporation, Detroit, Mich.

W. H. Klein, General Superintendent, Dixie Portland Cement Co., Richard City, Tenn.

F. C. Langenberg, Metallurgist, Watertown Arsenal and Metallurgist, Climax Molybdenum Co., New York City.

F. N. Speller, Metallurgical Engineer, National Tube Co., Pittsburgh, Pa.

These nominations were made by the Nominating Committee, the personnel of which was announced in the March BULLETIN, except those of Messrs. F. O. Clements and F. N. Speller, who were nominated by the Executive Committee in accordance with the provisions of the By-laws to fill vacancies created by the declination of two of the members originally named by the Nominating Committee.

Each of the above nominees has indicated in writing his acceptance of his nomination. The By-laws provide that "further nominations, signed by at least 25 members, may be submitted to the Secretary-Treasurer in writing by May 20, and a nomination so made, if accepted by the member nominated, shall be placed on the official ballot" which "shall be issued to the members between May 20 and June 1."

Increased Dues for Companies Proposed

As announced in the March BULLETIN, the Executive Committee will propose to the Society at the coming annual meeting that the membership dues of companies, firms, corporations, industrial associations and commercial testing laboratories be fixed at \$30, this modification, if approved by the Society, to become effective with the beginning of the next fiscal year, January 1, 1928. As stated in a previous BULLETIN, this recommendation is based upon careful study of the needs of the Society for greater income to carry on its work more effectively and assumes that the industrial and commercial value of the work to companies and corporations, both directly and indirectly, is so great as to justify the greater financial support that is requested from industry. It is believed that the majority of our company and association members will support this proposal.

The Executive Committee formally announces the following proposed amendments:

Amend Article VII, Section 1, to read as follows by the insertion of the italicized words and the omission of the words in brackets:

"Section 1. The fiscal year shall commence on the first day of January. *The annual dues, payable in advance, shall be as follows: For Members that are companies, firms, corporations, industrial associations or commercial testing laboratories, \$30; for all other Members, \$15; for Junior Members, \$7.50; for Student Members, \$3.* [The annual dues shall be \$15 for Members, \$7.50 for Junior Members and \$3 for Student Members, payable in advance.] Honorary Members shall not be subject to dues."

Amend the last sentence of Article VII, Section 3, to read as follows by the insertion of the italicized words and the omission of the words in brackets:

"The cost of membership in perpetuity to *companies, firms, corporations, industrial associations and commercial testing laboratories shall be \$600; to other organizations, \$300.* [corporations, firms, technical or scientific societies, teaching faculties or libraries shall be \$300.]"

AMERICAN SOCIETY FOR TESTING MATERIALS

BULLETIN

Issued Bi-Monthly

Engineers' Club Building, 1315 Spruce St., Philadelphia, Pa.

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Past-Presidents

F. M. FARMER

W. H. FULWEILER

Assistant Treasurer

J. K. RITTENHOUSE

Assistant Secretary

R. E. HESS

Number 26

April 28, 1927

An Anniversary

WITH the annual meeting in June the Society rounds out twenty-five years under its charter of incorporation, which was granted on June 4, 1902. It is planned to commemorate this event suitably during the annual meeting and, as announced in other columns, there will be held a Twenty-fifth-Anniversary Dinner, at which the principal emphasis in retrospect will be upon the personal and human side of our accomplishments in this quarter century of activities.

It is but natural that we should compare the early days of the Society with the present, and a few statistics will give a picture of the growth of the Society in this period:

	1902	1927
Number of members.....	175	4100
Attendance at annual meeting.....	75	905 (1926 meeting)
Number of standing committees.....	4	45
Number of committee members.....	80	2100
Number of standards and tentative standards.....	12	497
Volume of annual publications.....	388 pp.	3850 pp. (average)
Annual budget.....	\$4040	\$120,600

But these statistics at best are impersonal. They do not tell of the loyal service that has been put into the Society's work in these years, nor of the fine *esprit de corps* of our committee members who labor earnestly and effectively to further the objects for which we are organized. They do not measure the importance of the establishment of better technical and industrial relations between producer and user of materials that has been one of the outstanding accomplishments of the Society, nor show how the influence and authority of the Society throughout the engineering profession and the industries has grown with the industrial growth of the nation.

Hence, it is fitting that we should pause on this anniversary occasion, review the past, evaluate the present, and from them gain inspiration for the future development of our Society.

Three Honorary Members Elected

It is with much pleasure that we announce that by the unanimous action required in such matters, the Executive Committee has elected Robert W. Lesley, William R. Webster and A. A. Stevenson as Honorary Members of the Society. The formal presentation of certificates of Honorary Membership will be made at the Anniversary Dinner.

Robert W. Lesley entered the University of Pennsylvania in 1867. He left to go into business and in 1908 the University granted him the degree of A.M. as of his class of 1871. He was admitted to the bar in 1879. He is one of the pioneers of the cement industry in this country, having begun his connection with the industry in 1874. In 1880 he and associates organized the American Cement Co., which later became one of the largest manufacturers of portland cement. In 1904 he established "The Cement Age" and edited it for many years. In 1914 he became interested in the development of the surface combustion patents for gas fuels and is now president of the Surface Combustion Co. He was the first president of the Portland Cement Association and has recently written and published a "History of the Portland Cement Industry of the United States."

Mr. Lesley was one of the incorporators of our Society and served as Vice-President from 1902 to 1912. He has always taken a very active and influential part in the work of the Society in the fields of cement and reinforced concrete and has been a member of the committees on these subjects since their organization.

William R. Webster was graduated from the Massachusetts Institute of Technology in 1875. After considerable experience in steel manufacture and bridge work, he engaged in inspection of rails and other materials. One of his outstanding accomplishments was the working out of data from which the physical properties of steel could be reliably predicted from its chemical composition—the possibility of which had been seriously questioned in the early days of steel making. This development has had a far-reaching influence in the manufacture of steel.

Mr. Webster was one of the incorporators of the Society. He has taken an active part in Society affairs, serving as a member of the Executive Committee from 1907 to 1912 and as chairman of Committee A-1 on Steel from its organization in 1898 until 1913.

A. A. Stevenson entered the University of Illinois in 1879. After attending for two years he left to engage in engineering work and in 1888 went with the Standard Steel Works Co., with which he has since been continuously connected in various capacities—since 1908 as vice-president. His long and varied experience in the manufacture of steel has brought him many positions of honor and responsibility, among them the first chairmanship of the A. I. M. E. Iron and Steel Committee, the presidency of the Association of American Steel Manufacturers, and the chairmanship of the Gun-Howitzer Production Club organized during the World War to cooperate with the Government in the production of forgings for large caliber guns.

To our Society his services have been of the highest value. He served continuously on the Executive Committee from 1911 to 1920, and was elected President in 1916. For a number of years he was vice-chairman of the Steel Committee and has always been prominent in its activities. In more recent years he has notably served the Society upon the American Engineering Standards Committee, of which he was chairman in 1920 and 1921.

It is particularly appropriate that the Society should honor in this way three members who have attained such high standing in their professions and who have given to the Society so freely and fully of their knowledge, experience and judgment.

Twenty-Five-Year Members

In connection with the plans for commemorating the Twenty-fifth Anniversary of the incorporation of the Society, it is planned to give special recognition to those who have been continuously affiliated with the Society since 1902. The following two lists of 66 individuals and 74 organizations falling within that classification have been prepared by consulting membership records over the entire period. If any omissions are noted the Secretary-Treasurer will appreciate having his attention called to them.

INDIVIDUALS AFFILIATED WITH THE SOCIETY SINCE 1902

Barbour, Frank A.	McLeod, John
Broadhurst, W. H.	Moldenke, Richard
Burr, William H.	Mueser, William
Capp, J. A.	Neff, F. H.
Carpenter, Louis G.	Norris, George L.
Churchill, Charles S.	Olsen, Tinius
Clamer, Guillian H.	Porter, James Madison
Clark, Frank H.	Riehle, Frederick A.
Condron, T. L.	Sabin, A. H.
Derleth, Charles, Jr.	Saunders, Walter M.
Doble, William Ashton	Sauveur, Albert
Dow, Allan W.	Shankland, Ralph Martin
Du Comb, W. C., Jr.	Shimer, Porter W.
Edwards, Warrick R.	Shuman, Jesse J.
Flagg, Stanley G., Jr.	Smith, H. E.
Forrest, Charles N.	Spackman, Henry S.
Goss, William F. M.	Stevenson, A. A.
Greiner, J. E.	Stoughton, Bradley
Harriman, N. F.	Strobel, Charles L.
Hatt, William K.	Swain, George F.
Holton, E. C.	Talbot, Arthur N.
Humphrey, Richard L.	Thackray, George E.
Huston, Charles L.	Thomas, David
Jarecki, Alexander	Turneure, F. E.
Jewett, J. Y.	Van Ornum, J. L.
Job, Robert	Waddell, J. A. L.
Kennedy, Frank G., Jr.	Wagner, Samuel Tobias
Lanza, Gaetano	Webster, George S.
Lesley, Robert W.	Webster, William R.
Loweth, Charles F.	Wille, H. V.
Lundteigen, Andreas	Wing, Charles B.
Lynch, T. D.	Wood, Walter
MacPherran, R. S.	Woolson, Ira H.

ORGANIZATIONS AFFILIATED WITH THE SOCIETY SINCE 1902

*Ajax Metal Co., The	Lehigh Portland Cement Co.
Allis-Chalmers Mfg Co.	Logan Iron and Steel Co.
Alpha Portland Cement Co.	*Lukens Steel Co.
Altoona Iron Co.	Massachusetts Institute of Technology
*American Bridge Co.	National Lead Co.
*American Foundrymen's Assn.	*National Tube Co.
American Locomotive Co.	New York Central Railroad
*American Steel and Wire Co.	New York, New Haven and Hartford Railroad
Atlas Portland Cement Co.	Norfolk and Western Rwy. Co.
Baldwin Locomotive Works	Ohio State University
Baltimore and Ohio Railroad	Olsen Testing Machine Co.
*Bethlehem Steel Co., Inc.	*Osborn Engineering Co., The
*Booth, Garrett and Blair	Pennsylvania Railroad System
Brooklyn Dept. of Public Works	Philadelphia Dept. of Public Works
*Carnegie Steel Co.	Phoenix Bridge Co., The
Case School of Applied Science	Pittsburgh Testing Laboratory
*Central Iron and Steel Co.	Purdue University
Chicago, Burlington and Quincy Railroad	Reading Company, The
Chicago, Milwaukee and St. Paul Railway	Reading Iron Co.
Chicago and Northwestern Rwy.	Riehle Bros. Testing Machine Co.
*Colorado Fuel and Iron Co.	*Roebling's Sons Co., John A.
Columbia University	Sandusky Cement Co., The
Concrete-Steel Engineering Co.	Sellers and Co., Inc., William
Cornell University	*Sherwin-Williams Co., The
*Dixon Crucible Co., Joseph	*Standard Steel Works Co.
*Engineering News-Record	Stanford University
*Franklin Institute	Union Pacific Railroad Co.
General Electric Co.	University of Colorado
Harvard University	University of Illinois
*Hunt Co., Robert W.	University of Pennsylvania
*Illinois Steel Co.	University of Wisconsin
*International Harvester Co.	Virginia Polytechnic Institute
Iowa State College	Vulcanite Portland Cement Co.
Iron Age, The	Washington University
Jarecki Manufacturing Co.	Westinghouse Electric and Mfg. Co.
*Jones and Laughlin Steel Corp.	Wood and Co., R. D.
*Lowe Brothers Co., The	
Lafayette College	

*Holding company membership continuously since 1902.

Dudley Medal Awarded to D. J. McAdam, Jr.

The first Charles B. Dudley Medal, established by the Society for recognition of meritorious papers on research in engineering materials, will be awarded to Dr. D. J. McAdam, Jr., Metallurgist, U. S. Naval Engineering Experiment Station, Annapolis, Md., for his paper on "Stress-Strain-Cycle Relationship and Corrosion-Fatigue of Metals" presented at the annual meeting of the Society last year. The award is made upon the unanimous recommendation of the Medal Committee consisting of M. E. McDonnell, Chairman, William Campbell and A. T. Goldbeck, who have characterized the paper as "one possessing unusual merit, involving a large amount of original work, evidently thoroughly performed, concisely, clearly and thoroughly presented and having considerable practical significance."

Doctor McAdam received the degrees of A.B. and A.M. from Washington and Jefferson College. He spent two years in a post-graduate study of chemistry at Harvard and two years at the University of Pennsylvania, receiving the degrees of M.S. and Ph.D. from the latter institution. After several years spent in teaching chemistry at Lehigh University and in other positions, he assumed his present position as metallurgist at the U. S. Naval Engineering Experiment Station. He is a member of several technical and scientific societies and author of a number of papers on metallurgy. Doctor McAdam has made many valuable contributions to the Proceedings of the Society in addition to the one which has brought him the award of the Dudley Medal.

It is planned to make the formal presentation of the medal at the Anniversary Dinner to be held on Wednesday evening during the annual meeting of the Society.

Addition to Headquarters Staff

We take pleasure in announcing the addition to the Society's staff of Mr. Paul J. Smith, a recent graduate of the Civil Engineering Department of the University of Pennsylvania. The growth of the editorial and publication work of the Society has been very rapid in the past few years and has made the securing of a technically trained assistant necessary in order that the business of the Society may continue to be efficiently and expeditiously handled. Mr. Smith has been assigned to the editorial staff, and will be engaged specifically with the editing and publishing of the standards of the Society.

Society Appointments

Announcement is made of the following appointments:

G. W. Thompson, Chief Chemist, National Lead Co., Brooklyn, N. Y., as the Society's representative on the U. S. National Committee of the International Electrotechnical Commission.

A. C. Fieldner, Superintendent and Chief Chemist, Pittsburgh Experiment Station, U. S. Bureau of Mines, Pittsburgh, Pa., as the Society's representative on the Sectional Committee on Classification of Coal.

J. L. Christie, Metallurgist, Bridgeport Brass Co., Bridgeport, Conn., as the Society's representative at a Soil Corrosion Conference held under the auspices of the U. S. Bureau of Standards.

C. L. Warwick, Secretary-Treasurer, American Society for Testing Materials, Philadelphia, Pa., as a member of the Special Committee of the American Engineering Standards Committee on International Relations.

An Appreciation of A. S. T. M. Research

There was recently published in *The Metallurgist* (London), March 25, 1927, a very interesting discussion of standardization work in Great Britain and America, in the course of which some interesting comments were made upon the intrinsic importance of the A.S.T.M. research work and investigations into the properties of materials as complementary to our work of standardization. After pointing out the general similarity between the basic standardization procedure of the two countries, the writer continues:

"But the American Society goes much further than this—how much can be well seen from a recent publication of that body, the 'Review Number' of its Bulletin issued in January of this year. . . . There is, of course, a record of the work of its many committees and of the standards prepared by them for materials of all kinds, but beyond this there is a type of activity—and of a very vigorous nature—which resembles the work of our technical institutes and societies rather than that of our standards organization. . . .

"There is one important respect in which the work of the A.S.T.M. differs . . . and that is in the way in which it encourages and produces research directly related to actual problems of standardization. Everyone . . . must be familiar with the fact that problems continually arise which cannot be satisfactorily settled without fresh experimental research, and beyond these definite questions demanding an immediate and accurate answer before satisfactory specifications can be drawn up there are a great many problems which, while not so pressing, yet arise as questions needing a definite experimental answer in the interests, not only of actual standardization, but of the progress of engineering knowledge in general. In such matters the A.S.T.M. . . . can and does originate and encourage research."

This appreciation by our British colleagues of the research side of our work is especially interesting in that its importance has been given increasing emphasis in recent years.

International Congress for Testing Materials

Announcement of the International Congress for Testing Materials to be held September 12-17, 1927, at Amsterdam, Holland, was made in the March BULLETIN. Since that time a special committee consisting of T. D. Lynch, Chairman, P. H. Bates, T. G. Delbridge, Zay Jeffries and G. W. Thompson, has been appointed to plan for American participation in the Congress. This committee has secured offers of twenty-four papers from members of the Society upon topics that have been announced for discussion at the Congress and have transmitted these offers to the Dutch Committee in charge of the Congress program. Of these papers three are of a general nature; eleven relate specifically to the field of metals, including such topics as metallography, fatigue of metals, properties at high temperatures and magnetic testing; four to cement and concrete; and six to a group of miscellaneous materials. The subjects covered are all of considerable importance in this country and for the most part internationally. Several of the authors have already indicated their expectation of attending the Congress and presenting their papers in person.

Further details regarding the Congress, including the complete program, are expected from abroad in the near future and the members will be duly advised.

Two other foreign meetings of which the Society has been formally advised and which may be of interest to some of our members are a meeting of the German Society for Testing Materials, with an exposition, to be held in Berlin, September 20 to October 16, 1927; and the International Foundry Congress and Exposition to be held in Paris, September, 1927.

Use of A.S.T.M. Standards in Codes

An opportunity was recently afforded to review the building codes of a number of cities and towns of the country. It was gratifying to note that a large majority of these contain some reference to the A.S.T.M. standards. Apparently the laws of the several states and localities differ widely in the extent to which references can be made to an established standard. In some instances the reference is quite definite, specifying that material shall conform to A.S.T.M. Specifications C 9-24, A 16-15, C 34-24, etc., with such revisions as may from time to time be adopted in these standards by the Society. In others, while requirements for materials were quoted agreeing in all respects with the specifications of the Society, A.S.T.M. standards were only referred to in regard to the tests to be applied to the materials. A great number of the codes referred to the A.S.T.M. standard tests in this manner.

It was interesting to note that the codes more recently developed contained the greater number of references to A.S.T.M. standards. This is but natural, since many of the codes have stood unrevised for a number of years and when originally prepared only one or two A.S.T.M. standards were in existence that could be referred to. Our specification for cement is one of the oldest and is the one most frequently mentioned in the building codes. Some of the codes of the past few years, however, contain a score or more of references, a reflection of the greater extent to which the Society and its work is becoming known.

The employment of A.S.T.M. standards in connection with building codes appeals to us as one direction in which the Society's standards can be put to greatest use. When it is realized that the country now has a seven-billion-dollar annual building program and that the major portion of this comes under building code regulations, it will be seen how useful the A.S.T.M. standards can become if they are universally used in specifying materials in the codes. This is a thought that our members might keep in mind should any of them have occasion to serve in the preparation or administration of building codes.

Effect of Temperature on Metals

The Joint Research Committee on the Effect of Temperature on the Properties of Metals, of the American Society of Mechanical Engineers and the A.S.T.M., held a meeting on March 15 in Philadelphia. Additional reports from cooperating laboratories were received. Some interesting and important facts were observed concerning the comparison of results obtained by the various laboratories. Final conclusions on this subject will not be available until the remaining reports on these materials have been received and coordinated. Additional reports from other cooperating laboratories are anticipated in the near future.

Current titles were received for the bibliography which is being compiled by the committee, primarily for the use of the members in following developments on this subject. Consideration was given to the proposal of the American Society of Mechanical Engineers to publish this bibliography, probably in an amplified form.

The committee gave extended consideration to its proposed future program of extending laboratory work to cover physical and other characteristics of metals at high temperatures, other than those now in progress.

COMMITTEE ACTIVITIES

Space in the BULLETIN is reserved for items of interest about committee activities. Officers of committees are invited to prepare information of suitable character for publication.

March Group Meeting Largest Yet Held

The group plan of holding committee meetings adopted by the Society some few years ago has proved quite popular as was demonstrated this year with the regular Spring Group Meeting held at the Bellevue-Stratford Hotel, Philadelphia, on Tuesday, Wednesday, Thursday and Friday, March 15 to 18. With an attendance of 425, the meeting was the largest yet held, with the following twenty-five A.S.T.M. committees taking part: Committee A-1 on Steel, A-3 on Cast Iron, A-5 on Corrosion of Iron and Steel, A-6 on Magnetic Analysis, B-1 on Copper Wire, B-2 on Non-Ferrous Metals and Alloys, B-3 on Corrosion of Non-Ferrous Metals and Alloys, C-3 on Brick, C-7 on Lime, C-9 on Concrete and Concrete Aggregates, C-11 on Gypsum, D-4 on Road and Paving Materials, D-5 on Coal and Coke, D-8 on Waterproofing Materials, D-9 on Electrical Insulating Materials, D-11 on Rubber Products, D-14 on Screen Wire Cloth, D-15 on Thermometers, D-16 on Slate, D-18 on Natural Building Stone, E-4 on Metallography, Sections of Committee E-1 on Thin Sheet Metals, and on Tension Testing, and Section, of Committee B-2, on Die-Cast Metals and Alloys.

In addition, meetings were held by the Joint Research Committee of the A.S.T.M. and the American Society of Mechanical Engineers on the Effect of Temperature on the Properties of Metals, of the Sectional Committee on Numbering of Steels and of two Research Committees on Gray Iron of the American Foundrymen's Association.

The opportunity offered by these group meetings for the members to attend a number of committee meetings consecutively at one place effects a considerable saving of time and for this reason is heartily endorsed by those participating. In addition they afford the members of the several committees an opportunity of meeting one another. Details of arrangements were taken care of by a local committee consisting of:

	J. H. Higgins, Chairman
A. L. Ferguson	W. P. Smith
S. T. Wagner	J. K. Rittenhouse

No small amount of the success of the meeting was due to this committee.

The various actions taken at the meetings on recommendations to be made at the annual meeting on standards and tentative standards will appear in the annual reports of the committees and accordingly are not covered here in detail. Brief mention is made of some few features of the committee work as follows:

Committee A-1 on Steel.—It was reported that the proposal to cooperate with the American Railway Association in an investigation of the effect of inclusions in forgings has been accepted by the A.R.A. committee and steps are being taken to arrange for joint consideration of this matter by the two bodies. Combined specifications were presented to replace the present Standard Specifications for Structural Steel for Locomotives and for Structural Steel for Cars, which embodied a number of modifications that bring the specifications into line with those of the American Railway Association. The specifications will be recommended to the Society for publication as tentative. In the preparation of the Specifications for Marine Boiler Steel, recommended

(Continued on page 9)

Preservative Coatings

Committee D-1 on Preservative Coatings held a meeting in Richmond on April 14, in connection with the meeting of the American Chemical Society, at which the committee took final action on a number of recommendations to be presented before the Society in June. The committee is submitting new specifications for boiled linseed oil to replace its present standard and tentative specifications for this product. It is recommending the advancement to standard of the present Tentative Specifications for Raw Linseed Oil in somewhat modified form. It is also recommending the advancement of the Tentative Specifications for Destructively-Distilled Wood Turpentine. The Method for Determining Wax in Shellac is being revised and new methods of testing solvents and diluents for lacquers are being proposed. New specifications are also being submitted for a number of pigments.

Petroleum Products and Lubricants

At its meeting in Baltimore on March 4, Committee D-2 on Petroleum Products and Lubricants took action on a number of recommendations on standards and tentative standards. The committee is recommending the advancement to standard of the tentative methods of test for sulfur in oils, for the distillation of petroleum products, for steam emulsion of lubricating oils, for burning quality of kerosine oils and of long-time burning oils and mineral colza oil, for the distillation of natural gas gasoline, for thermal value of fuel oil and methods of analysis of grease.

The plate method for melting point of petrolatum is being proposed to take the place of the present method. The methods for penetration of greases is being revised. The committee is developing a method for determining sediment in fuel and crude oils containing a large percentage of wax. Revisions are being made in the methods for flash and fire points, of test for water in petroleum products and for detection of sulfur in gasoline.

Committee D-7 on Timber

At the meeting of Committee D-7 on Timber held in Chicago on March 9, it was reported that cooperative work is being carried out by the American Railway Engineering Association and the A.S.T.M. to make the timber specifications of the two organizations as nearly identical as possible.

The committee is recommending for adoption as standard the following: Tentative Specifications for Joists, Planks, Beams, Stringers and Posts; Tentative Methods of Test for Distillation of Creosote Oil; of Test for Coke Residue; of Testing Small Clear Specimens of Timber; and for Conducting Static Tests of Timber in Structural Sizes. The committee is also recommending that the Tentative Specifications for Yellow Pine Bridge and Trestle Timbers and for Southern Yellow Pine Timber to be Creosoted be withdrawn.

A paper is being prepared for presentation at the International Congress for Testing Materials, setting forth the work and accomplishments of the committee and the correlation of this work with the industries, with special reference to the grading rules and standard methods of test.

Sectional Committee Notes

The following items of interest are given concerning the activities of certain sectional committees for which the Society is sponsor, functioning under the Rules of Procedure of the American Engineering Standards Committee:

Cement.—The Sectional Committee on Cement has submitted a report to the Society recommending by a vote of 17 affirmative, 3 negative and 2 not voting, that the revised A.S.T.M. Standard Specifications for Portland Cement be offered to the American Engineering Standards Committee for approval as American Standard. The Executive Committee of the Society has acted favorably on this recommendation and the report will be transmitted to the A.E.S.C.

Cast Iron Pipe.—The Sectional Committee on Specifications for Cast-Iron Pipe held a well-attended meeting on March 15 in New York City at which the program of activities of its three technical committees on (1) Dimensions, (2) Metallurgy, Processes and Tests, and (3) Corrosion and Protective Coatings, were reviewed. The program includes:

(1) Review of present dimensions and weights of pipe and fittings with such tests and investigations as may be required to determine such matters as proper thickness of barrels of pipe under trench load and water pressures, etc.

(2) Investigation of pig iron and other raw materials entering into cast iron for pipes, melting practice in the casting of pipes and acceptance tests relating to the strength of pipes and the quality of metal.

(3) Study of the causes and mechanism of corrosion of cast-iron pipe exposed to soil or water, including the preparation of specifications for coating or other pipe shop procedure to increase resistance to corrosion.

The three technical committees and a number of their sub-committees are fully organized and at work on their problems.

Fire Hose.—Since its organization on November 5, 1926, reported in the November BULLETIN, this sectional committee has held two meetings which have brought appreciably nearer an agreement upon single standard specifications for fire hose for use by private and public fire departments. Consideration is now being given by the committee to a third draft of the specifications, representing the harmonizing of a number of points of difference between existing specifications of several organizations.

Zinc Coating of Iron and Steel.—The sectional committee on this subject has made substantial progress in its work, having under development specifications covering the zinc coating of sheets, structural shapes, wire and wire products. A report will be made to the Society in June.

Screens for Coarse Aggregates

A new section of the Sub-Committee on Size and Shape, of Committee E-1 on Methods of Testing, is being organized under the chairmanship of F. H. Jackson, Engineer of Tests, U. S. Bureau of Public Roads, Washington, D. C., for the purpose of harmonizing the present requirements for screens used in the mechanical analysis of coarse aggregates. Considerable confusion exists at the present time in that both round-hole screens and square-mesh screens are used in grading essentially the same products.

The section will include in its personnel representatives of the Society's Committees C-9 on Concrete and Concrete Aggregates and D-4 on Road and Paving Materials, and also of Committee D-5 on Coal and Coke. It is planned to have representation from highway interests, such as constructors of both bituminous and cement-concrete roads. The Society looks to this section to eliminate the present discrepancies and to arrive at standard specifications for screens as was done for fine aggregates in the adoption of our present Standard Specifications for Sieves (E 11 - 26).

Corrosion Tests of Metal Culverts

Committee A-5 on Corrosion of Iron and Steel has appointed a new sub-committee on metal culvert corrosion tests, which is to be organized at a meeting to be held on Wednesday, April 27, at Columbus, Ohio. The proposed personnel of the committee follows:

JAMES H. GIBBONEY, Temporary Chairman, Chief Chemist, Norfolk and Western Railway Co., Roanoke, Va.

W. J. BECK, Director of Research, American Rolling Mill Co., Middletown, Ohio.

H. S. MATTIMORE, Engineer of Materials, Pennsylvania State Highway Department, Harrisburg, Pa.

O. H. HANSARD, Engineer of Tests, State Highway Department, Nashville, Tenn.

J. T. HAY, Metallurgical Engineer, Central Alloy Steel Corporation, Massillon, Ohio.

B. P. HAZELTINE, Research Engineer, Wheeling Steel Corporation, Wheeling, West Va.

E. F. KELLEY, Acting Chief, Division of Tests, U. S. Bureau of Public Roads, Washington, D. C.

W. C. SWARTOUT, Senior Assistant Engineer, Missouri Pacific Railway Co., St. Louis, Mo.

E. S. TAYLORSON, Engineer of Tests, American Sheet and Tin Plate Co., Pittsburgh, Pa.

W. H. WOODBURY, Valuation Engineer, Duluth and Iron Range Railroad Co., Duluth, Minn.

Mr. Gibboney as temporary chairman is arranging for the sub-committee to determine what can be done in the way of correlating existing information on corrosion of metal culverts and, if additional tests seem desirable, to determine the nature and scope of such tests. The formation of this sub-committee marks an important extension of the work of the Society in the corrosion field.

Die Casting Alloys

During the past year, Committee B-2 on Non-Ferrous Metals and Alloys initiated work on aluminum die casting metals. The work has assumed such proportions that a separate sub-committee has been organized to cover die casting alloys in general, including aluminum, zinc, tin and lead-base alloys. A meeting of this new sub-committee was held in Philadelphia on March 18, under the chairmanship of Mr. H. A. Anderson, Bell Telephone Laboratories, Inc., New York City.

During the past six months a list of the more generally used aluminum die casting alloys had been prepared. The value of various tests on specimens in evaluating the usefulness of these alloys for the manufacture of the castings in question was discussed and it was decided to make tension, hardness and impact tests on standardized forms of test specimens on twelve alloys. These specimens will be cast by some half-dozen leading manufacturers of die castings and will be tested in a number of laboratories. It is expected that by means of such a test program the relative advantages of the various alloys as cast in the form of specimens will be determined and in time information will be accumulated which will serve to indicate how closely the test results on such specimens would represent the suitability of the various alloys for use in the complicated form of castings ordinarily made by the pressure die method.

March Group Meeting

(Continued from page 7)

as tentative, the committee has cooperated with the Boiler Code Committee of the American Society of Mechanical Engineers, and the American Marine Standards Committee, the Steamboat Inspection Service and other agencies interested in marine boiler steel.

Committee A-3 on Cast Iron discussed the importance of investigations of impact, wear and fatigue tests of cast iron, in which particular emphasis was placed upon the need for developing fundamental information on the properties of cast iron. A very interesting and important program of fatigue tests has been arranged through the cooperation of J. B. Kommers of the University of Wisconsin, who has offered to make a series of fatigue tests, for the committee, of three kinds of cast iron: tractor iron, pipe iron, and high test iron for engine castings. The tests will be made at normal temperature by means of the usual complete reversal of stress in bending.

Committee A-5 on Corrosion of Iron and Steel.—A second important field investigation undertaken by the committee is now definitely under way at five localities: Sandy Hook, N. Y.; Altoona, Pa.; Pennsylvania State College; Pittsburgh, Pa.; and Key West, Fla. The locations were chosen with the object of having varying atmospheric conditions, such as salt air, semi-industrial, rural, industrial and semi-tropical. At each site complete sets of zinc-coated sheets have already been installed, and coated wire fencing and general hardware and structural shapes which are normally exposed to the atmosphere are being collected and will probably be installed shortly. These tests, which may take ten years or more to complete, will serve to fix the value of zinc protective coatings under different atmospheric conditions, and fix likewise the amount of coating which is economical.

Committee A-6 on Magnetic Properties is now at work on the formulation of definitions of a number of terms used in magnetic testing. It hopes to present this list of definitions at the approaching annual meeting. A new sub-committee on tests at high values of magnetizing force is being organized.

Committee A-8 on Magnetic Analysis received reports from various members who are developing apparatus for inspecting steel and steel products by means of magnetic methods. One method of examination in particular was described which shows promise of being exceedingly valuable. This method uses the newly-developed cathode ray oscillograph for the comparison of material under test with specimens which have been selected as standards of quality.

Committee B-1 on Copper Wire has revised its specifications for trolley wire so that they will now be identical with those of the American Electric Railway Association, with which the A.S.T.M. has been cooperating in the developing of the specifications for trolley wire. Cooperation will be continued with the A.E.R.A. on the development of Specifications for High-Strength Alloy Trolley Wire. Since Committee B-1 has been enlarged and its personnel approved as a Sectional Committee under the procedure of the American Engineering Standards Committee, the full cooperation of the American Institute of Electrical Engineers, National Electric Light Association and the representatives of the communication companies has been secured in the consideration of possible revisions in the Specifications for Hard-Drawn and for Medium Hard-Drawn Wire.

Committee B-2 on Non-Ferrous Metals and Alloys will present to the Society this year new Tentative Specifications for Copper Tubing for Refrigerators, for Brazing Solder, for Yellow Brass Castings, and for Strip Zinc. The tentative specifications proposed for strip zinc present some interesting new testing features, having reference to the

bend testing of thin strip metal, particularly zinc, and other metals having low melting points, and methods and new equipment are outlined for accurate execution of such tests.

In addition, the committee is developing specifications for fire-refined copper, for manganese metal for use in the deoxidizing of non-ferrous metals and for silver solders.

Committee C-9 on Concrete and Concrete Aggregates.—The Sub-Committee on Specifications has suggested a revision of that portion of the report of the Joint Committee on Concrete and Reinforced Concrete relating to the proportioning, materials and mixing of concrete. It is believed by the committee that the suggested requirements will be more generally acceptable to the concrete industry as a whole, including both the large and small contractors and on both big and little jobs.

Committee D-5 on Coal and Coke.—The Sub-Committee on Coke Tumbler Test reported progress in assembling information as to details of the method of making the test as used at the present time by users of metallurgical coke, and presented a first draft of a tentative method. The Sub-Committee on Tolerances presented a plan for doing experimental work to obtain data as to satisfactory special tolerances allowable when different parties sample the same shipments of coal. The sub-committee will cooperate with the Prime Movers Committee of the National Electric Light Association which latter committee is interested in this same problem.

Committee D-9 on Electrical Insulating Materials.—The Sub-Committee on Molded Insulation has been at work attempting to standardize the tension test specimen. A satisfactory specimen has been developed and it is expected that in a short time a standard tension test specimen will be recommended.

As a result of tests made by some five different laboratories, using slightly different modifications of the same method, it has been shown that it is possible to obtain quite satisfactory results for the losses in insulating materials at radio frequencies. Up to the present time it has been very questionable as to what accuracy could be ascribed to such measurements, but in the light of the recent series of tests it has been shown that several different variations in the methods of test can be used and still obtain very satisfactory results.

Committee D-11 on Rubber Products.—The work of Sub-Committee XII has developed to such an extent that it was found necessary to divide the work among three new Sub-Committees on Life Tests or Aging of Rubber Compounds, on Abrasion Tests as Applied to Rubber Compounds, and on Flexing Tests as Applied to Rubber and Fabric Compositions. The interest in abrasion testing, which began with tires, has now reached into the field of mechanical rubber goods, for example, belting and hose and also insulated wire.

Committee D-15 on Thermometers completed a revision and standardization of the special thermometers used for the loss on heating test for asphalts. A large volume of data has been assembled and was critically reviewed on the proposed new thermometer for turpentine distillation. A report on recent work of the Bureau of Standards was reviewed, presenting more accurate methods for determination of stem temperatures with particular reference to the stem temperature of partial-immersion instruments when used under varying conditions of test.

Committee D-16 on Slate considered tentative methods of test for electrical insulating properties of slate, which are expected to be presented at the next annual meeting.

It was proposed that a sub-committee be appointed to consider abrasive sand for rubbing beds for slate.

Committee D-18 on Natural Building Stones is further organizing its work in a way that will permit an actual start to be made on the research and test program which this

(Continued on page 10)

committee has in mind. The membership was broadened by election of new members from the marble industry, so that now the granite, limestone and marble industries are well represented on this committee. Steps to further extend the representation of the committee were taken.

Arrangements were made for securing funds necessary to finance such further work of compiling a bibliography and a working file of data as was found necessary in planning the actual series of test studies on physical properties and weathering of building stone that the program of this committee includes.

New Members to April 20, 1927

The following 70 members were elected from March 1, 1927, making the total membership 4118.

American Cyanamid Co., M. R. Trimmer.
American Gas Assn., Inc., Testing Laboratory, R. M. Conner.
American Thread Co., Inc., W. L. Bragdon.
Arnzen, F. E. (Fall River Bleachery).
Asbestos Shingle, Slate and Sheathing Co., J. W. Ledeboer.
Asneft's Experimental Station, L. M. Chasotsky.
Atlanta, Ga., City of, W. A. Hansell.
Belajef, N. M. (Institute of Engineers of Ways of Communications, Leningrad).
Butler, A. D. (City Engineer, Spokane, Wash.).
Carter Oil Co., G. A. Shaner.
Champe, George (Civil Engineer).
Christensen, Einar (National Building Units Corp.).
Consolidation Coal Co., Inc., R. E. Rightmire.
Cruciger, C. F. (Spang, Chalfant & Co., Inc.).
Dayton, O., City of, Department of Buildings, Marion Hay.
Detroit, City of, Department of Public Works, J. W. Reid.
Draper Brothers Co., C. M. Draper.
Engelbrecht, E. H. A. (Canterbury College, New Zealand).
Everett, C. M. (Hazen & Whipple).
Everseal Manufacturing Co., Inc., R. F. Green.
Gregg, L. D. (The Gregg Co., Ltd.).
Grisbaum, Leonard (Railway Service and Supply Corp.).
Halliburton, V. F. (Mid-Continent Petroleum Corp.).
Hancock, Edwin (Edwin Hancock Engineering Co.).
Hanover Wire Cloth Co., A. G. Moul.
Hartman, M. L. (The Celite Co.).
Hayford, W. S. (Bell Telephone Labs., Inc.).
Heck, G. H. (Eastern Concrete Products Assn.).
Hickcox, A. P. (Scovill Mfg. Co.).
Humet, Enrique (Civil Engineer).
Inland Manufacturing Co., A. H. Flower.
Jacksonville, Fla., City of, W. E. Sheddon.
Kirsopp, E. C. B. (Resinous Products and Chemical Co.).
Kliem, Brown & Co., F. C. Kliem.
Krug, C. M. (Keystone Laboratory).
Leonard, S. J. (Drexel Institute).
Lewin Metals Corporation, T. Lewin.
Lincoln Oil Refining Co., T. W. Culmer.
Lynam, C. H. (Standard Oil Co. of Calif.).
MacMichael, H. R. (American Smelting and Refining Co.).
Mayo, C. R. (Fox & Mayo).
Mode, R. C. (Ste. Anne Paper Co., Ltd.).
Mond Nickel Co., Ltd., W. T. Griffiths.
National Gypsum Co., W. J. Dixon.
New Mexico College of Agriculture and Mechanic Arts Library.
Owings, J. W. (Atwater Kent Mfg. Co.).
Peery, H. R. (Western Electric Co.).
Pennington, Harry (Producer of Petroleum).
Peterson, A. E. (C. M. Fassett Co., Inc., Engineering Labs.).
Pittsburgh, City of, Department of City Transit, Winters Haydock.
Prehler Brothers, Inc., H. P. Prehler.
Ramey, C. F. (Standard Oil Co.).
Ratti, Franco (Societa Franchi-Gregorini).
Reading, City of, E. C. Weber.
Roxana Petroleum Corporation, A. C. Daldy.
Sauquoit Silk Manufacturing Co., W. R. Rossmassler.
Scholer, E. E. (Missouri Valley Sand and Gravel Assn.).
Scullin, C. J. (St. Louis Coke and Iron Corp.).
Secor, A. T. (Florida Public Service Co.).
Spruce Falls Power and Paper Co., Ltd., W. R. Pearce.
Steinman, D. B. (Consulting Engineer).
Struven, A. L. (Simon J. Murphy Co.).
Superior Steel Corporation, R. E. Emery.
Taylor, R. C. (American Can Co.).
Toledo Steel Casting Co., C. C. Smith.
Western Machinery Co., C. H. Stanfield.
Watson, R. M. (Wise & Watson).
Wood Iron and Steel Co., Alan, V. H. Lawrence.
Wood, W. P. (University of Michigan).
Woodbury, W. H. (Duluth & Iron Range R. R.).

List of Publications

Proceedings, Volume 26 (1926).—The Proceedings for 1926 in two parts: Part I, committee reports with discussions and new and revised tentative standards (1204 pp.); Part II, technical papers with discussions (691 pp.). Prices to non-members: paper \$12.00, cloth \$13.00, half-leather \$16.00. To members for extra copies: \$7.00, \$8.00 and \$11.00, respectively.

Book of A.S.T.M. Standards.—Issued triennially. The 1924 edition (1230 pp.) and the 1925 and 1926 Supplements (117 and 110 pp.) contain the 271 standards adopted by the Society. Prices to non-members: cloth \$12.00, half-leather \$13.50. To members for extra copies: \$8.50 and \$10.00, respectively.

Supplements to Book of Standards.—The 36 standards adopted in 1925 forming the first supplement to the 1924 Book of A.S.T.M. Standards are issued in a pamphlet of 117 pp. and the 23 standards adopted in 1926 forming the second supplement are issued in a pamphlet of 110 pp. Prices to non-members for each supplement: \$1.50. To members for extra copies, \$1.00.

Book of A.S.T.M. Tentative Standards.—The 1926 edition (1100 pp.) contains 227 tentative standards issued by the Society. Prices to non-members: paper \$7.50, cloth \$8.50. To members: \$5.00 and \$6.00, respectively.

Separate Standards and Tentative Standards.—Separate copies of all standards and tentative standards are available. The price is 25 cents for a single copy and in lots up to 50. Larger quantities are furnished at lower prices.

Complete Sets of Proceedings from 1902 to 1926, inclusive (with the exception of Vols. I and III). Special prices are made to members for extra copies and for complete sets. Binding in paper, cloth or half-leather.

Index to Proceedings, containing both an author and subject index of committee reports and technical papers, including discussions. Index to Vols. I-XII, 1898-1912 (158 pp.). Prices to non-members: \$1.50 in cloth, \$2.00 in half-leather; to members: \$1.00 in cloth, \$1.50 in half-leather. Index to Vols. XIII-XX, 1913-1920 (189 pp.). Prices to non-members: \$2.50 in cloth, \$3.50 in half-leather; to members: \$1.75 in cloth, \$2.75 in half-leather.

Special Reprints from Proceedings

Symposium on Effect of Temperature upon the Properties of Metals: Four papers summarizing existing knowledge presented at Cleveland meeting of A.S.T.M. and A.S.M.E., May, 1924, complete with discussion and valuable bibliography (184 pp., paper cover). Price, \$1.50.

Symposium on Corrosion-Resistant, Heat-Resistant and Electrical-Resistance Alloys: Thirteen papers on all phases of the subject presented at A.S.T.M. meeting at Atlantic City, June, 1924, containing three large inset tables of data on ninety of these alloys, complete with discussion (265 pp., paper cover). Price, \$2.00.

1924 Report of Joint Committee on Standard Specifications for Concrete and Reinforced Concrete, including complete specifications with 14 A.S.T.M. specifications and methods of test appended (152 pp., paper cover). Price to non-members, \$1.50. To members, \$1.00.

Special Pamphlet on Textile Materials, containing six standards and eight tentative standards, as well as data relating thereto and information concerning the work of Committee D-13 on Textile Materials (70 pp.). Second edition. Price, \$1.00.

1926 Report of Committee D-2 on Petroleum Products and Lubricants, containing eight tentative and two standard methods of test (83 pp.). Price, \$1.00.

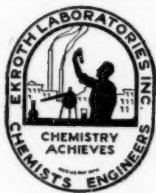
Reports of Committee A-5 on Corrosion of Iron and Steel, for the years 1923, 1924, 1925 and 1926. Separate reprints. Price, 50 cents each.

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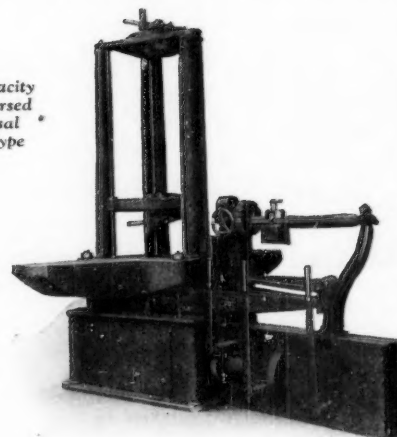
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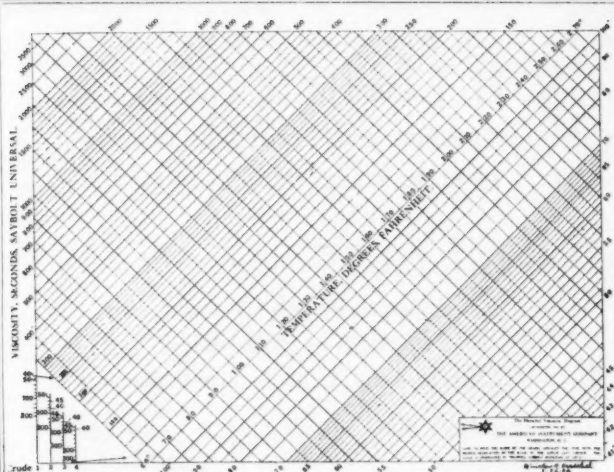
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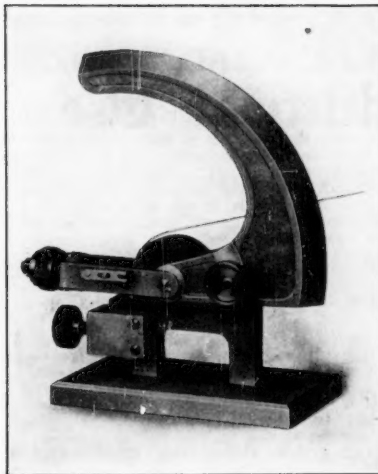
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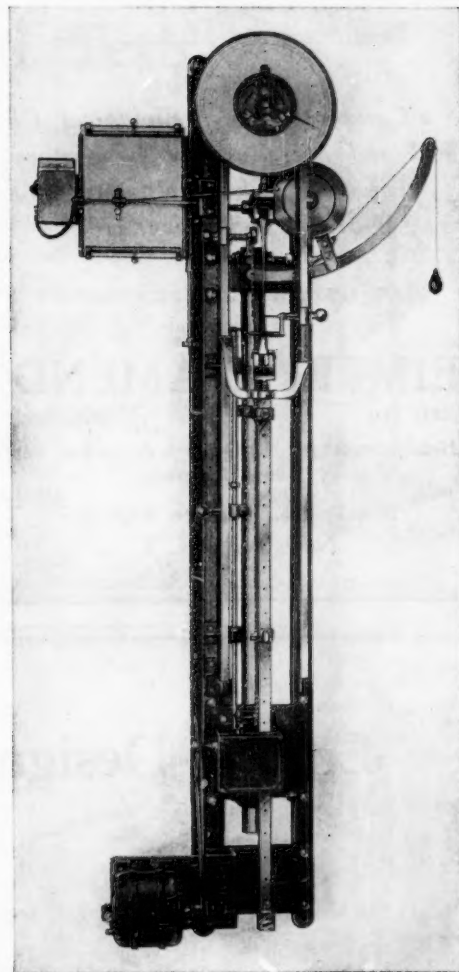
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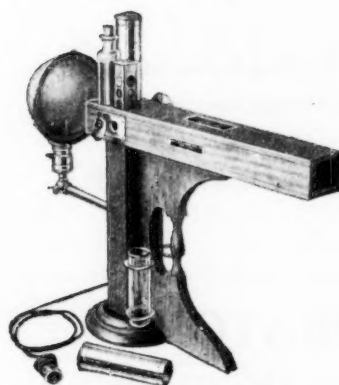
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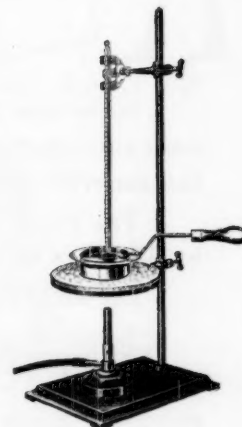
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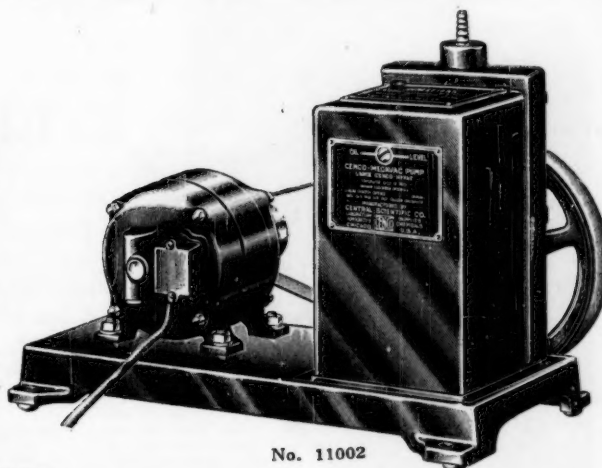
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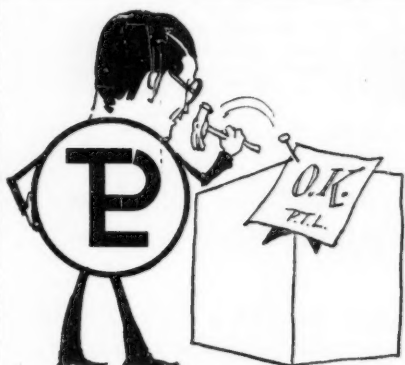
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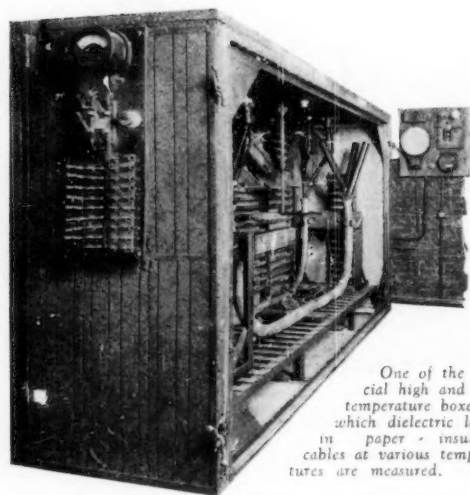
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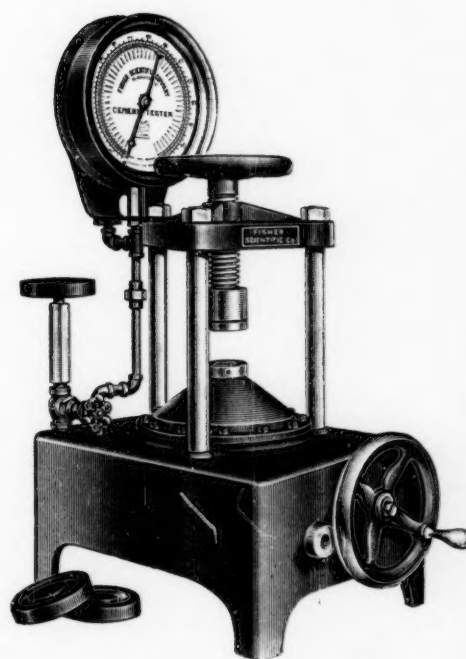
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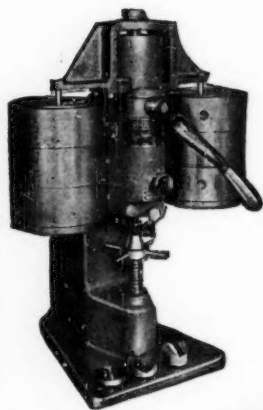
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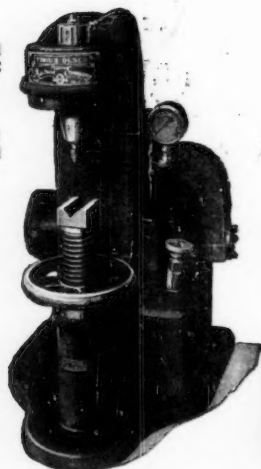
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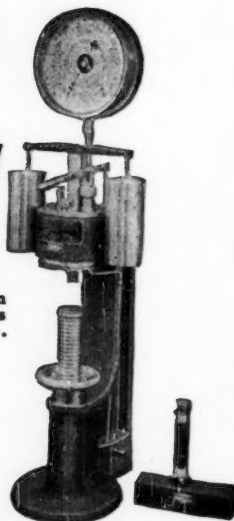
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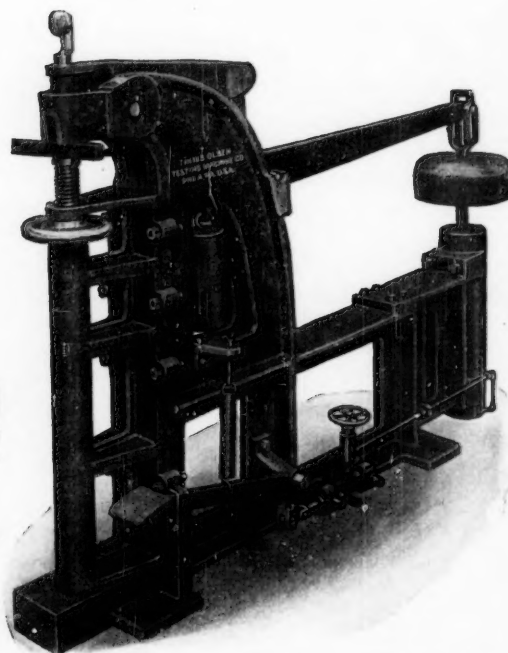
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